

## **Rearming Dummy Grenades**



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Surplus practice grenades can be easily converted to live status in the home workshop. These converted units have several advantages over improvised grenades. The completed unit is waterproof, the cast iron body shatters well into deadly fragments, the shape and weight are handy for both hand throwing and rifle launching. The fuse is lit with no smoke, flash and relatively little noise. Probably most important is the lever/pin system. The unit is absolutely safe until the pin is removed. After pin removal, the armed grenade can be loaded in a launcher or carried in the hand, in both cases it's ready for immediate use. This eliminates fumbling around with lighters, strikers and friction igniters. This is also the type of grenade that TV terrorists carry in their hand, without pin. "Shoot me and we all die", etc. These practice grenades are identical to a real, live grenade except for the following:

- a. The filler hole at the bottom of the body has not been threaded, and is left open. No plug is supplied.
- b. The fuse assembly is supplied with a fired primer and burnt out fuse, usually corroded in place.
- c. Some examples have had the striker and striker spring removed; others are supplied with the above parts intact.
- d. No igniters or explosive charge is supplied.

Several military surplus suppliers are currently selling these 'inert' grenades. Ads may be found in Shotgun News and in several gun magazines. Many examples of these grenades are rusty, dinged

up and are missing the striker and spring. Some are of recent manufacture, while others date back to the early 1950's. When ordering grenades from a surplus outfit, be sure to specify 'moveable parts' as most dealers also sell training grenades. These are cast in one piece, contain no firing apparatus and are useful as paperweights only.

Conversion procedure:

## **A. Body**

The unthreaded hole in the bottom of the cast iron body varies from 3/8" to 5/8" diameter. The preferred procedure is to thread this hole and install a removable filler plug. This allows the fuse assembly to be installed and waterproofed on the empty grenade body. The unarmed grenades can be safely stored in this manner and filled with powder prior to use. If threading the hole is not possible, it may be sealed permanently by soldering a plug in place. A glob of auto body plastic filler may also be used. The only other work required on the body is to true up the top surface where the fuse assembly screws in. A file should be used to make this surface as flat as possible. This will allow a tight, moisture proof fit between body and fuse assembly. The rubber washer supplied is often cracked and should be replaced with a new one of similar size.

## **B. Fuse Assembly**

NOTE: If using the three piece surplus grenade Cock Striker System, and install the safety lever and pin before proceeding onto the rest of the fuse assembly. If striker system is not available one can be improvised by the method below. (If using a two piece grenade, one would have to use common sense to implement the same changes safely and effectively.)

First one would have to acquire a cap gun. Use a revolver with a transparent casing. Using this gun you won't have to work blind. A revolver is the easiest to work with. You will have to disassemble the gun, to get to the firing assembly. Be careful what you break off when you are trying to get to the firing assembly. If you damage it you may have to get a new gun and you would have wasted your money. So be careful! Once you get the firing assembly out, remove the trigger mechanism. You should be left with just the "Hammer/Spring Assembly." Mount the "Hammer/Spring" Assembly on to the base. Mount it so that the hammer sits on top of the cap. The hammer should be mounted so that it applies constant force to the cap, without having it striking the cap. Then hot glue it on the bottom of the base. Drill a hole through the casing in front of the hammers "Cocked Position" (This is where the pin will go). Stick the pin through the hole. To arm the striker system pull the hammer back until it passes the hole for the pin. Hold it there then insert the pin. Make sure the pin is secure and won't drop out while being handled. After this is done the rest of the fuse assembly is now safe to be worked on.

Insert a long punch or nail, about 1/16" diameter, in the bottom of the fuse assembly. Drive out the spent primer and powder residue from the tube. Use a 1/8" drill to clean out and enlarge this tube. Then you need to drill a very small hole (1/32" or less) between the fuse and the primer so that the hot gases generated by the burning fuse can vent out and not build up pressure, which forces the fuse to burn up so much faster. You cover the vent hole with a strip of aluminium foil with superglue. The foil will keep the fuse dry until it's lit, then the pressure will blow out the foil. Enlarge the primer pocket to accept a small or large pistol or rifle primer, whichever is available. A black powder cap may also be used. The primer or cap should be flush with the top of the fuse body

when installed. The hole should be large enough to allow the primer or cap to be pressed into the hole with finger pressure only. Cut a circle of aluminium foil about 7/16" in diameter and epoxy in place over the primer or cap. This acts as a moisture barrier and allows the grenade to be carried in foul weather without worrying about misfires due to damp primers. Test various lengths of 3/32" cannon fuse. The test should determine reliability and the specific burning rate for that particular roll. This is important because although fuse is consistent within each roll, the burning rate may vary greatly from one roll to the next. Cut a length of fuse that will give the proper delay. If a fuse cannot be obtained a sodium/potassium nitrate & sugar mix can be used as a substitute. This mix would have to be made into a paste and on top of this black powder would have to be used, to ensure ignition of this slow burning mixture. Five seconds is generally accepted as a good duration, but the actual time may be varied to suit your individual needs. The Nazis often left grenades lying around with no delay fuse at all. When a G.I. pulled the string on what he thought was a 5 second delay fuse, he was greeted with an instantaneous explosion. If for some reason you make up a batch of fuse assemblies with various time delays, it's imperative that you color code or otherwise mark them for your future identification. When the proper length fuse is determined, cut both ends on a diagonal for maximum exposure of the black powder centre. This ensures both good ignition from the primer and a nice fat spark to detonate the explosive filler. Coat the fuse except the ends, with epoxy, and press into place inside of the fuse assembly. If the grenade body will be filled with black or smokeless powder, potassium chlorate & sugar the spark from the fuse itself will be sufficient to detonate the filler. If the entire body will not be filled, a wad of paper should be used to ensure that a quantity of filler is held in place around the fuse. The spark cannot be counted on to make a jump. If a more sophisticated explosive filler is to be used, be sure to use the correct companion booster or igniter charge. Most high explosives cannot be detonated by fuse only. When the epoxy is dry, coat the threads of the grenade body with Permatex or a similar non-drying gasket sealer. This will form a waterproof seal between the body and fuse assembly, yet allow for later disassembly if necessary. After addition of the explosive filler, the filler plug should also be coated with Permatex before installing. If the filler hole has been permanently sealed instead of threaded for a plug, the explosive must be added before the fuse assembly is installed. Wipe all powder grains from the threads before installing the fuse assembly. The grenade is now ready for use. When using this grenade make sure to pull the pin in a quick, and fluent motion. This will help ensure that the striker will strike with enough force to detonate the cap.

Warning: Don't Let The Pin Slip Out or You Will Initiate The Cap, Which Will Ignite the Delay Fuse Giving You 3-5 Seconds (If You Installed The Delay Fuse Correctly), Before The Primary Explosive Detonates, Which In Turn Sets off The Secondary Explosive, Thereby Blowing You To Bits. This Is A Very Bad Thing. If You Followed All Directions Above, This Won't Happen, If This Does Happen, Then You Didn't!

## **C. Detonator**

Primary charge: ACETONE PEROXIDE- (Acetonetriperoxide)

DETONATION VELOCITY - 3750 M/sec @ 0.92 G/cc

5300 M/sec @ 1.18 G/cc

Acetone peroxide is a powerful primary explosive. It, as with other explosive peroxides, seems to be very volatile. In standing 10 days at room temperature, 50% of the sample will completely volatilise. It is a powerful, brisant explosive. Its vaporizable nature makes it an explosive that would have to be used immediately after manufacture. However, this explosive is compatible with metals and will not cause their corrosion and the subsequent dangers involved. It is also compatible with picric acid, R.D.X., T.N.T., P.E.T.N., Tetryl, potassium chlorate and antimony sulfide.

It is highly friction sensitive and extreme care should be taken to avoid this. Great care would be needed to handle this explosive carefully. It is a powerful primary base charge in the cap. Also mixtures of R.D.X. and Picric acid with acetone peroxide are reported to be used between primary explosive and the base charge.

**CAUTION:** Acetone peroxide one of the most sensitive explosive known to man, this composition is dangerous and would need to be handled by someone with a lot of common sense. Mixtures such as picric acid/acetone peroxide (40/60) or similar mixtures with R.D.X. and P.E.T.N. will give explosives greatly increased resistance to impact without losing much initiation performance.

Great care would be needed to ensure the safety of the manufacturer due to the high sensitivity of the acetone peroxide. These dried crystals would be ready to load into detonators for immediate use as the storage stability is not very good.

### ***MANUFACTURE:***

Acetone peroxide is formed when hydrogen peroxide (30%) acts on acetone. The introduction of hydrochloric acid (HCL) causes the reaction to go into completion. Procedure is as follows. 150 ml acetone is placed in a one-pint jar or 500 ml beaker. To this is added 200 ml hydrogen peroxide (30%). This liquid is placed in an ice water bath and cooled to 5 degrees centigrade. To this cooled mixture is added 50 ml of hydrochloric acid (38%). This addition is done at 5 degrees centigrade and done in a dropwise fashion. When the temperature begins to rise (10 degrees C.), slow the addition until the temperature falls again. With the completion of the addition stir the mixture. A flocculent precipitate will form. This is filtered out after the mixture stands for 3 days. Wash the white product three times with water (distilled preferably). Let the material filtered out of the reaction dry. By spreading out the acetone peroxide this drying process can be speeded up. These dry crystals are now ready for loading into the grenade as a primary explosive.

### **D. Filler**

ANNM Plastique (ammonium nitrate nitromethane)

This plastique explosive is very simple to make. It makes use of the tendency of nitromethane to gelatinize or collidanize nitrocellulose. The nitromethane used in this process is obtained from model airplane/ racing fuel. The fuel used is 35% nitromethane content, although if you can obtain a higher percentage of nitromethane will increase the power of the explosive, but is more expensive to obtain. Ammonium nitrate and glass microballons or powdered styrofoam are used. As in other explosive compositions the glass microballons (microspheres) are used to reduce the density of the explosive thus sensitizing it to easier detonation. This explosive will be the equivalent of 75% dynamite. Brisance is very high and detonation rate should be around 6000-6600 M/sec.

***MANUFACTURE:***

Start by placing 200 grams of 35% nitromethane model racing fuel in a glass container (jar). Add to this 30 grams IMR smokeless powder in the racing fuel and let set for three days. The nitromethane will gel the nitrocellulose (smokeless powder) and after this amount of time the gelled nitromethane/nitrocellulose is scooped out of the liquid with a spoon. The oil remaining on the solution is allowed to run off and the gelled nitromethane is then mixed with 210 grams of finely powdered ammonium nitrate, along with 10 ½ grams of aluminium powder. This is kneaded with gloved hands until a very uniform mixture is obtained. To this plastique is added 8-10 grams of microspheres or powdered styrofoam. This is again kneaded with gloved hands until a uniform mixture is obtained. This explosive plastique is then ready to load into grenade. It may be stored in a cool dry place. If after storage the plastique hardens somewhat, the addition of 2-3 grams acetone will return the explosive to a very soft plastique form.

The glass microballons can be omitted and you will still have a fairly easy explosive to detonate. Beware, if using double-base smokeless powder people have been known to get some severe headaches after kneading this stuff without gloves. Nitro-glycerine can be absorbed into the skin from the double base so be careful.

With that said you now have all the components to your soon to be extremely powerful, live grenade...

USE WITH CAUTION... FOR OTHERS!